

REMARKS

This is a continuation of Application Serial No. 09/652,984, filed August 31, 2000. By virtue of this Preliminary Amendment, applicants have amended claims 1, 2, 5, 7 and 8, and have added new claims 9-20. In particular, applicants have amended independent claims 1 and 7 to more clearly recite that the I/O devices are directly coupled to applicants' I/O bridge. Applicants' I/O bridge, which further includes a coherent buffer, is thus distinguishable over the prior art, including prior art host bridges, which are typically disposed at processor nodes and are thus not directly coupled to any I/O devices.

No new matter is being introduced. Support for the amendments may be found in the Specification as originally at pp. 8-13 and Figs. 4-6, among other places.

Applicants submit that the application, as amended, is distinguishable over the art of record. For example, U.S. Patent No. 6,389,526 to Keller et al. ("Keller"), which was cited in the parent application, discloses a host bridge that is disposed at a processing node and that contains a coherent buffer. Keller further discloses an I/O bridge that is directly coupled to one or more I/O devices. Keller's I/O bridge, however, fails to include a coherent buffer, because Keller's I/O bridge is outside of the coherent domain established by Keller's computer system. Although Keller's host bridge is within the coherent domain, no I/O devices are directly coupled to it.

In contrast, applicants have discovered a way of extending the coherent domain of a multiprocessor computer system all the way out to the I/O bridges. Significantly, applicants' solution does not result in an overly complex system nor does it introduce exces-

sive message overhead. Instead, applicants' have designed their system such that the I/O bridges are granted exclusive access over the coherent data that they receive. The I/O bridges are further configured to release coherent data upon request. Even though applicants' I/O bridges release coherent data upon request, at least some of that data, e.g., the number of bits corresponding to one I/O bus cycle, can still be provided to the I/O device that originally requested the information, thereby preventing livelock. Keller fails to teach or suggest any method for extending a computer system's coherent domain out to the I/O bridges. Instead, Keller follows the conventional approach of placing its I/O bridges outside of the coherent domain. That is, Keller's I/O bridges operate only on non-coherent data.

Applicants submit that the application, as amended, is in condition for allowance and early favorable action is requested.

If a telephone interview could be beneficial in advancing the prosecution of this application, the Examiner is invited to contact the undersigned counsel.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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